66 and the other engaging the clamp cleats 48 on the truck clamp surface 46 of the side rails 14. The clamp cleats 48 provide a roughened surface for the attachment clamp 50 to engage ensuring a secure attachment of the present invention and the tonnesu cover 12 to the pickup truck box 66.

The longer portion of the L-shape of the side rails 14 forms the side rail component mount surfaces 44 to which the mounting apparatus for the tensioning rail 16 and the tensioning screw 18 are attached. Additionally, each of the 52 which serves as both the outward cosmetic edge of the side rails 14 and as guides or frames within which the tonneau cover 12 is stretched. Additionally, the tensioning rail 16 is also equipped with two tensioning rail end caps 54 which fit over each end of the tensioning rail 16 just inside of the side rail diagonal surface.

The method of operation of the tonneau cover tension adjuster apparatus 18 is further illustrated in FIGS. 6 and 7. To reduce the tension or loosen the tonneau cover 56 for either its removal or installation, the user rotates the screw adjustment knob 20 in a clockwise manner which serves to pull the tensioning rail 16 back through the tensioning screw 18 and the tensioning rail attachment block 30 (the loosening movement accomplished by this operation is illustrated by the directional arrows labeled as 60). Conversely, to obtain a tensioned or taught tonneau cover 58, when latched 25 one simply reverses this process by rotating the screw adjustment knob 20 in a counter-clockwise manner which serves to force the tensioning rail 16 forward through the tensioning screw 18 and tensioning rail attachment block 30 (the tensioning movement accomplished by this operation is 30 illustrated by the directional arrows labeled as 62).

Although the present invention has been described in considerable detail with reference to certain preferred versions thereof, other versions are possible. Therefore, the spirit and scope of the appended claims should not be limited 35 to the description of the preferred versions contained herein.

What is claimed is:

- L An adjustable assembly for a cargo box cover for use on a cargo box having upwardly extending left and right side walls. a front wall and a rear end gate wall, said walls defining the boundaries of the cargo box, the cargo box cover having a left and right rail connected to said left and right side wall, an clongate tensioning rail having a left and right end said tensioning rail extending from said left rail to said right rail and further having a cover fixedly attached along said tensioning rail, said adjustable assembly com. 45 prising:
 - a left and right block means connected to said left and
 - left and right end of said tensioning rail; and
- · an adjustable connection means for connecting said tensioning rail to said left and right rail.
- 2. An adjustable assembly as in claim I wherein each of right rail comprises a front and rear block section connected to a base block section so as to define a space between said front and rear block section, said front and rear block sections further defining a hole in an aligned orientation so as to pass through said front and rear block section across said space between said front and rear block sections.
- 3. An adjustable assembly as in claim 2 wherein each of said left and right attachment block means comprises an attachment block section having an elongate treaded tension screw fixedly attached to said attachment block section and extending through said front and rear block sections span. 65 ning said space between said front and rear block section.

4. An adjustable assembly as in claim 3 further comprising a screw adjustment knob between said front and rear block section defining an inner threaded hole for receiving said threaded tension screw.

5. An adjustable assembly as in claim 4 further comprising a graduated measuring scale on said left and right rail so as to accurately adjust said left and right side of said tensioning rail in respect to said left and right rail.

6. An adjustable assembly as in claim 5 wherein said hole side rails 14 also have an upwardly criented diagonal surface 10 defined by said front and rear block sections is of a larger diameter than said threaded tension screw.

- 7. An adjustable assembly as in claim 1 wherein said left and right block means is fixedly connected to said left and right end of said tensioning rail and said left and right attachment block means is fixedly connected to said left and right rail.
- 8. An adjustable cover for a cargo box that comprises upwardly extending left and right side walls. a front wall and a rear end gate wall said walls defining the boundaries of the cargo box. the adjustable cover assembly comprising:
 - a left and right rail connected to said left and right side
 - an elongate tensioning rail having a left and right end said tensioning rail extending from said left rail to said right
 - a left and right block means connected to said left and right rail:
 - a left and right attachment block means connected to said left and right end of said tensioning rail; and
 - an adjustable connection means for connecting said tensioning rail to said left and right rail.
- 9. An adjustable cover for a cargo box as in claim 8 wherein each of said left and right block means connected to said left and right rail comprises a front and rear block section connected to a base block section so as to define a space between said front and rear block section, said front and rear block sections further defining a hole in an aligned orientation so as to pass through said front and rear block section across said space between said front and rear block

19. An adjustable cover for a cargo box as in claim 9 wherein each of said left and right attachment block means comprises an attachment block section having an clongate treaded tension screw fixedly anached to said attachment block section and extending through said front and rear block sections spanning said space between said front and rear block section.

 An adjustable cover for a cargo box as in claim 19 a left and right attachment block means connected to said 50 further compaising a screw adjustment knob between said front and rear block section defining an inner threaded hole for receiving said threaded tension screw.

12. An adjustable cover for a cargo box as in claim 11 further comprising a graduated measuring scale on said left said left and right block means connected to said left and 35 and right rail so as to accurately adjust said left and right side of said tensioning rail in respect to said left and right rail.

13. An adjustable cover for a cargo box as in claim 12 wherein said hole defined by said front and rear block sections is of a larger diameter than said threaded tension screw.

14. An adjustable cover for a cargo box as in claim 8 wherein said left and right block means is fixedly connected to said left and right end of said tensioning rail, and said left and right attachment block means is fixedly connected to said left and right rail.

- 15. (New) An adjustable
 assembly for a tonneau cover used
 to cover a pickup truck cargo box,
 the cargo box having a plurality of
 upwardly extending walls, said
 plurality of upwardly extending walls
 including left and right side walls, a
 front wall and a rear end gate wall,
 said plurality of upwardly extending

 walls at least partially defining an
 interior compartment of the cargo
 box, the adjustable assembly
 comprising:
- 15 <u>left and right side rails connected to</u> <u>said left and right side walls,</u> <u>respectively;</u>
- an elongate tensioning rail having
 left and right ends, said tensioning
 rail extending from the left side rail
 to the right side rail, the tonneau
 cover attached to the tensioning rail;
- 25 <u>left and right side rail attachment</u>
 <u>bracket mechanisms connected to</u>
 <u>said left and right side rails,</u>
 respectively; and
- 30 <u>left and right tensioning rail</u>
 <u>attachment members engaged with</u>
 <u>said tensioning rail; wherein each of</u>
 <u>said left and right side rail</u>
 <u>attachment bracket mechanisms</u>
- include a threaded screw member, and each of the threaded screw members are positioned and arranged such that a force can be placed on the elongate tensioning
- 40 rail by each of the threaded screw members as said screw member is adjustably manipulated to drive the tensioning rail away from the respective attachment bracket
- 45 mechanism, thereby placing greater tension on the tonneau cover.

16. (New) The adjustable assembly of claim 15, wherein the tensioning rail includes a tensioning rail attachment chamber and each of said left and right tensioning rail attachment members is engaged within the tensioning rail attachment chamber.

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- assembly of claim 16, wherein each of said left and right tensioning rail attachment members extends below the side rail with which it is engaged such that the tensioning rail is restrained from being lifted away from the respective side rails when the attachment members are engaged with the respective side rails.
- 18. (New) The adjustable
 assembly of claim 15, wherein each
 of the pair of threaded screw
 members is engaged in coaxially
 aligned, reciprocally threaded
 openings in each of the respective
 side rail attachment bracket
 mechanisms.
- 19. (New) An adjustable cover assembly for a cargo box, the cargo box including upwardly extending left and right side walls, a front wall and a rear end gate wall, the adjustable cover assembly comprising:
- 40 <u>left and right side rails connected to said left and right side walls, respectively;</u>
- a tonneau cover having forward andrearward ends;

an elongate tensioning rail having
left and right ends, said elongate
tensioning rail extending from said
left side rail to said right side rail, the
forward end of the tonneau cover
being secured to the elongate
tensioning rail;

- 10 left and right side rail attachment bracket mechanisms connected with said left and right side rails, respectively; and
- left and right tensioning rail attachment members engaged with 15 said tensioning rail; wherein each of said left and right side rail attachment bracket mechanisms include a threaded screw member. and each of the threaded screw 20 members are positioned and arranged such that a force can be placed on the elongate tensioning rail by each of the threaded screw members as said screw member is 25 adjustably manipulated to drive the tensioning rail away from the respective attachment bracket, thereby placing greater tension on 30 the tonneau cover.
- 20. (New) The adjustable
 assembly of claim 19, wherein the
 tensioning rail includes a tensioning
 rail attachment chamber and each
 of said left and right tensioning rail
 attachment members is engaged
 within the tensioning rail attachment
 chamber.
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 21. (New) The adjustable
 assembly of claim 20, wherein each
 of said left and right tensioning rail
 attachment members extends below
 the side rail with which it is engaged
 such that the tensioning rail is

restrained from being lifted away from the respective side rails when the attachment members are engaged with the respective side rails.

22. (New) The adjustable
assembly of claim 19, wherein each
of the pair of threaded screw

10 members is engaged in coaxially
aligned, reciprocally threaded
openings in each of the respective
side rail attachment bracket
mechanisms.

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23. (New) An apparatus for varying the position of an end rail of a tonneau cover attachment frame used to secure a tonneau cover to a pickup truck cargo box, the attachment frame including at least one end rail and opposing left and right side rails, the tonneau cover being secured to the end rail, the apparatus comprising:

a first adjustment block mechanism, the first adjustment block mechanism being attached to one of said side rails; and

30 a first tensioning screw, the
first tensioning screw operatively
connected to the first adjustment
block mechanism and movable with
respect thereto, with the first
tensioning screw configured and

arranged to operatively contact the end rail; wherein movement of the first tensioning screw with respect to the first adjustment block

40 mechanism, in a direction toward the end rail, varies the position of the end rail with respect to the respective side rail.

45 <u>24. (New) The apparatus of claim</u> 23, wherein the first tensioning screw is movable in a direction
generally parallel to the side rail and
wherein the end rail is slidingly
engaged with the opposing left and
right side rails and movable with
respect thereto in a generally
orthogonal, constrained manner.

25. (New) The apparatus of claim
23, further comprising a second
adjustment block mechanism, the
adjustment block mechanism being
attached to the other of said left and
right side rails, and

15 a second tensioning screw,
the second tensioning screw
operatively connected to the second
adjustment block mechanism and
movable with respect thereto, with

20 the second tensioning screw configured and arranged to operatively contact the end rail; wherein movement of the second tensioning screw with respect to the

25 second adjustment block
mechanism, in a direction toward
the end rail, varies the position of
the end rail with respect to the other
side rail.

26. (New) The apparatus of claim
25, wherein the second tensioning

screw is movable in a direction generally parallel to the side rail.

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27. (New) An apparatus for shifting the position of a slideable end rail of a tonneau cover attachment frame that includes at least one end rail and parallel left and right side rails, the tonneau cover being attached to the end rail,

cover being attached to the end rawherein the end rail is slidingly connected to the parallel left and

45 <u>right side rails and movable with</u> respect thereto in a generally orthogonal, constrained manner, the apparatus comprising:

a first adjustment block
mechanism, the first adjustment
block mounted to the left side rail
and configured to operably contact
the end rail and, upon manipulation
thereof, shift the position of the end
rail with respect to the left side rail in
a direction away from the first
adjustment block mechanism; and,

a second adjustment block
mechanism, the second adjustment
block mounted to the right side rail
and configured to operably contact
the end rail and, upon manipulation
thereof, shift the position of the end
rail with respect to the right side rail
in a direction away from the second
adjustment block mechanism.

28. (New) A shifting apparatus
which operatively contacts an end
rail of a tonneau cover frame for
attaching a tonneau cover to a
cargo box of a pickup truck, the
tonneau cover frame having parallel
left and right side rails and an end
rail, the tonneau cover being
attached to the end rail, the
apparatus comprising:

a first adjustment block
mechanism, the first adjustment
block attachably mounted to the left
side rail and configured to operably
contact the end rail and, upon
manipulation thereof, shift the
position of the end rail with respect
to the left side rail; and,

45 a second adjustment block mechanism, the second adjustment block attachably mounted to the

right side rail and configured to operably contact the end rail and, upon manipulation thereof, shift the position of the end rail with respect to the right side rail wherein the end rail is slidingly engaged with the parallel left and right side rails and movable with respect thereto in a constrained manner.

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29. (New) The shifting apparatus of Claim 28, wherein each of the first and second adjustment block mechanisms include a threaded screw members that is positioned and arranged such that a force can be placed on the end rail by each of the threaded screw members as said screw member is adjustably manipulated to drive the end rail away from the respective adjustment block mechanism, thereby placing greater tension on the tonneau cover.

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- 30. (New) An adjustable
 assembly for a tonneau cover used
 to cover a pickup truck cargo box

 having a plurality of upwardly
 extending walls, said plurality of
 upwardly extending walls including
 left and right side walls, a front wall
 and a rear end gate wall, said

 plurality of upwardly extending walls
 at least partially defining an interior
 compartment of the cargo box, the
 adjustable assembly comprising:
- 40 <u>left and right side rails connected to said left and right walls, respectively;</u>
- 45 <u>left and right ends, said elongate</u> tensioning rail extending from said

left side rail to said right side rail, the tonneau cover being attached to the elongate tensioning rail;

- 5 <u>left and right side rail attachment</u> <u>block mechanisms connected to</u> <u>said left and right side rails,</u> <u>respectively; and</u>
- 10 left and right tensioning rail attachment blocks engaged with said left and right ends of said elongate tensioning rail, respectively, and each slidingly
- 15 engaging the respective side rail proximate the respective ends of the elongate tensioning rail such that the elongate tensioning rail is slidingly engaged with the opposing
- 20 left and right side rails and movable with respect thereto in a generally orthogonal, constrained manner; wherein the left and right side rail attachment block mechanisms
- 25 <u>include left and right screw</u> <u>members adjustably contacting said</u> <u>tensioning rail.</u>
- 31. (New) A method of maintaining an appropriate tension 30 on a tonneau cover secured to a cargo box of a pickup truck, the pickup truck cargo box having a plurality of upwardly extending 35 walls, said plurality of upwardly extending walls including left and right side walls, a front wall and a rear end gate wall, said plurality of upwardly extending walls at least 40 partially defining an interior compartment of the cargo box; the
- 45 and a tonneau cover attachment frame having a tonneau cover

method comprising:

adjustment mechanism to the pickup truck, the tonneau cover attachment frame including left and right side rails which are connected to said left and right side walls, 5 respectively; an elongate tensioning rail having left and right ends, said tensioning rail extending from the left side rail to the right side rail, the tonneau cover attached to the 10 tensioning rail; left and right side rail attachment bracket mechanisms connected to said left and right side rails, respectively; the elongate tensioning rail including left and right 15 tensioning rail attachment members engaged with said tensioning rail; wherein each of said left and right side rail attachment bracket mechanisms include a threaded 20 screw member, and each of the threaded screw members are positioned and arranged such that a force can be placed on the elongate tensioning rail by each of the 25 threaded screw members as each said screw member is adjustably manipulated to drive the tensioning rail away from the respective attachment bracket mechanism, 30 thereby placing greater tension on the tonneau cover; and

manipulating the respective
attachment bracket mechanisms so
as to drive the tensioning rail away
from the respective attachment
bracket mechanism, thereby placing
greater tension on the tonneau

cover following the step of attaching,
at such time as it is desireable to
place a greater tension on the
tonneau cover.

45 <u>32. (New) A method of</u> maintaining an appropriate tension on a tonneau cover secured to a
cargo box of a pickup truck, the
pickup truck cargo box having a
plurality of upwardly extending

walls, said plurality of upwardly
extending walls including left and
right side walls, a front wall and a
rear end gate wall, said plurality of
upwardly extending walls at least

partially defining an interior
compartment of the cargo box; the
method comprising:

attaching a tonneau cover 15 and a tonneau cover attachment frame having a tonneau cover adjustment mechanism to the pickup truck, the tonneau cover attachment frame including left and 20 right side rails which are connected to said left and right side walls, respectively; an elongate tensioning rail having left and right ends, said tensioning rail extending from the 25 left side rail to the right side rail, the tonneau cover attached to the tensioning rail; left and right side rail attachment bracket mechanisms connected to said left and right side 30 rails, respectively; the elongate tensioning rail including left and right tensioning rail attachment members engaged with said tensioning rail and positioned and arranged to 35 sliding secure the elongate tensioning rail to the respective side rails: wherein each of said left and right side rail attachment bracket mechanisms include a threaded 40 screw member, and each of the threaded screw members are positioned and arranged such that a force can be placed on the elongate tensioning rail by each of the 45 threaded screw members as each said screw member is adjustably

manipulated to drive the tensioning rail away from the respective attachment bracket mechanism, thereby placing greater tension on the tonneau cover; and

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manipulating the respective
attachment bracket mechanisms so
as to drive the tensioning rail away

from the respective attachment
bracket mechanism, thereby placing
greater tension on the tonneau
cover following the step of attaching,
at such time as it is desireable to
place a greater tension on the
tonneau cover.